

Clostridial diseases

What you will see

| Diagnosis | Behaviour | Skin/Muscle | Convulsion | Death |
|-----------------------------|---------------|-----------------------|------------|-------|
| Pulpy kidney | Depressed | | Yes | Rapid |
| Black disease | Depressed | | | Rapid |
| Blackleg & malignant oedema | Depressed | Swollen, rancid black | | Rapid |
| Tetanus | Over-reactive | Spasms, stiff walk | Yes | Slow |

Impact

All sheep can be affected, survival is rare and treatment following diagnosis mostly fails.

Likelihood

Bacteria live everywhere, in all regions, but to multiply and cause an impact, a trigger is needed. Likely triggers for clostridial diseases:

- a diet change, liver fluke, skin or muscle wounds or bruising (fighting, lambing, shearing, marking, yarding).
- a pasture flush.

Strategic prevention

- Vaccinate for increased immunity.
- Control liver fluke.
- Avoid wounds.
- Practice good hygiene during invasive procedures.
- Treat wounds with penicillin.

Tactical response

Quickly get a professional diagnosis to prevent further cases:

- treat sick sheep immediately.
- vaccinate all at-risk sheep. Before choosing a vaccine, seek professional advice on your risk of black disease, blackleg and malignant oedema.
- Black disease: vaccinate the unvaccinated and bury carcasses.
- Blackleg and malignant oedema: vaccinate the unvaccinated and administer penicillin if it is early in the outbreak.
- Pulpy kidney: vaccinate the unvaccinated, restrict feed and give roughage.
- Tetanus: give antitoxin if found early.

Types of clostridial vaccines

- 3 in 1 vaccine prevents pulpy kidney, tetanus and cheesy gland
- 5 in 1 vaccine prevents pulpy kidney, tetanus, black disease, blackleg and malignant oedema
- 6 in 1 vaccine includes 5 in 1 plus cheesy gland

For comprehensive immunity

- Assume introduced sheep are unvaccinated.
- Always read and follow the vaccine product label. The key principles are:
 - unvaccinated sheep and lambs need a priming shot and a follow-up booster in four weeks
 - administer lifelong annual boosters for cheesy gland
 - administer one annual booster for tetanus
 - administer extra boosters as needed for pulpy kidney. In high challenge periods, sheep who have not been given a pulpy kidney vaccine within the last three months should be given a booster, ideally 10 days before the challenge occurs.
- Vaccination cannot guarantee 100% immunity in all sheep but is strongly recommended as when done properly, remains highly effective.



TIPS AND INFORMATION

- Before choosing a vaccine, seek professional advice on your risk of black disease, blackleg and malignant oedema.
- Generally, the cost of a vaccination program is very small compared to the cost of the disease it prevents. One way to look at it is as a form of insurance.

Resource links

MLA A producers' guide to sheep husbandry procedures

[MMFS Tool 11.12 Prevention of clostridial diseases and cheesy gland](#)

New South Wales

[How vaccination works](#)

Queensland

Livestock vaccination

South Australia

Lamb vaccination

[Sheep diseases – the farmers' guide](#)

Tasmania

[Cheesy gland or CLA](#)

Western Australia

Pulpy kidney (enterotoxaemia) of sheep

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